

# MUST News

Department of Environmental Quality

Spring Issue 2009

## Release Autopsies for 2008 – Numbers Downs

The release statistics reveal a total of 31 releases discovered in Montana last year. We have switched from tracking our statistics on the calendar year to the federal fiscal year that ran from October 1, 2007 through September 30, 2008, to better synch with other federally required reports. Despite the shift, this number of releases is significantly down from the 67 releases reported in 2007, 42 in 2006, and 65 in 2005. These previous years are discussed in recurring spring issues of *MUST News*, found at: <http://www.deq.state.mt.us/UST/MUSTnews.asp>.

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Ravalli County Airport

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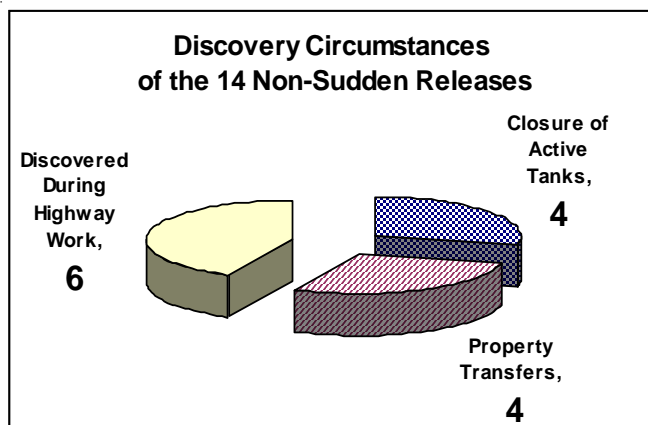
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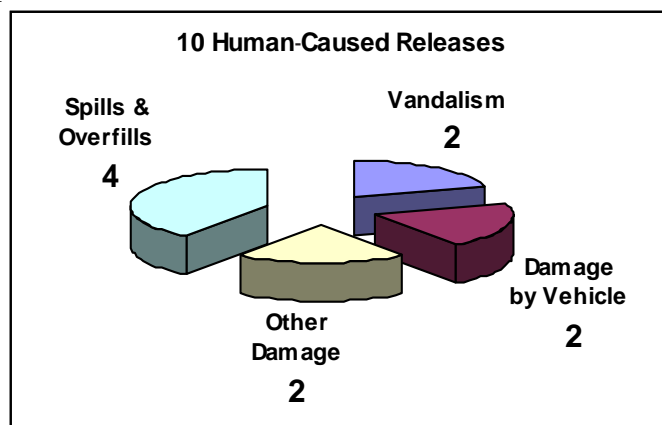
## Release Autopsies for 2008 – Numbers Down - *continued from page 1*



Of the 31 total releases discovered in 2008, 17 originated as sudden releases and 14 non-sudden releases. Non-sudden releases include contamination discovered during tank removals or historical contamination discovered through environmental site assessments. Ten of the non-sudden releases were discovered through investigations that were conducted for property transactions or as part of highway construction projects. Although the Montana Department of Environmental Quality (DEQ) tracked the sources and causes differently in 2007, this percentage is very similar to what it was last year: a little less than half of the discovered releases were from historic or non-sudden releases in 2007.

Of the 17 sudden releases, 10 were caused by human errors or actions, and 7 were caused by equipment failure or acts of nature. The 7 non-human caused releases happened from a variety of reasons without any discernable pattern. Some were from water freezing and splitting above-ground pipes, others were caused by tanks rusting or rubber hoses deteriorating, and one was caused by ice falling from a roof and damaging an above-ground pipe.

The 10 human-caused releases reveal patterns that may help us avoid similar releases in the future. Spills and overfills were the main reasons for human-caused releases in 2008. Spills and overfills were also the largest type of human-caused releases in 2007. Three of the four releases in 2008 were relatively small, less than 100 gallon surface spills that were readily cleaned up and resolved. The fourth one is the extremely large spill of over 4,500 gallons of jet fuel that was the subject of a *MUST News* article in the fall 2008 issue, found at <http://www.deq.state.mt.us/UST/MUSTnews/MUSTFall2008.pdf>. Damage caused by vehicles



running into pumps or bulk loading racks only accounts for two of the releases last year. This is compared to three similar accidents in 2007. Vehicles damaging petroleum storage equipment appears to be a consistent and ongoing burden in the industry. One release was caused when a tanker drove away with a large bulk fuel hose still connected to it, destroying the loading stand. Another release originated when a drill rig drilled into a pressurized fiberglass product line while installing a monitoring well to investigate another release at the facility.

A new and disturbing trend we saw last year were two releases intentionally caused by vandals. These two cases were unrelated and on different ends of the state. One was a ranch near Helena and the other was a school in Glen, Montana. Both cases involved above-ground storage tanks (ASTs) with gravity fed rubber hoses with fueling nozzles. Both releases occurred when the valves were left open and the ASTs drained. The lesson learned here is to lock your valves and nozzles on this type of tank.

What predictions can we make from these statistics? Releases are considerably reduced from previous reporting years and we hope this will continue in the future. Previously unidentified petroleum releases are still being identified when environmental assessments are completed for land purchases and during highway projects. These for the most part are historical releases not associated with active facilities. So it only follows that sooner or later they will all be identified, but they seem to continue for the time being. The total number of human-caused releases appears to be decreasing at the same rate as the total number of releases have decreased, but they are a consistent and constant through time, and probably will remain that way as long as we have humans operating equipment. ■

# Stimulus Funds Could Help Plug Montana's Leaking Underground Storage Tank Program

The Montana Department of Environmental Quality (DEQ) is seeking \$1.3 million dollars in federal stimulus funds through a cooperative agreement grant with the US Environmental Protection Agency (EPA) to assess and clean up underground storage tank petroleum leaks, or releases. The federal agency announced on April 8, 2009, the distribution to states and tribes of \$197 million appropriated under the American Recovery and Reinvestment Act (ARRA) of 2009 for underground storage tank investigation and remediation. Montana's apparent share is \$1.3 million.

"The Department can only expend these funds to address contamination from federally-defined underground storage tanks where an owner or operator is unidentified, unable, or unwilling to perform the necessary work themselves," says Sandi Olsen, DEQ Remediation Division Administrator. "The DEQ is also required to recover expended funds from viable owners and operators responsible for the underground storage tanks following expenditure."

Sites to be remediated using stimulus money include release sites that threaten human health and the environment where: (1) the release source is unknown or (2) the tank owner is unable or unwilling to perform the work themselves, or (3) in response to catastrophic high-risk sites where the DEQ determines that the state actions are necessary to address immediate risks to human health or the environment.

One of the potential health threats from a leaking underground storage tank is caused by hazardous substances in

petroleum, such as the carcinogen, benzene, that can seep into the soil and contaminate groundwater, a primary source of drinking water.

There are more than 1,600 active petroleum storage tank releases in Montana. EPA guidance and grant conditions will help the DEQ select which Montana release sites are eligible to receive the stimulus funds. Notwithstanding any specific restrictions and conditions on these funds, the guiding principle, that work be completed on sites posing the greatest risk to human health and the environment, will determine where the funds will be used.

The EPA regional underground storage tank programs will enter into cooperative agreements with states and territories in spring 2009. Montana's Leaking Underground Storage Tank (LUST) Trust program, which falls under the Remediation Division of the DEQ, applied for the grant and will implement the projects.

## Jobs and Employment Opportunities

For this work, the DEQ plans to employ contractors who have been selected from a previous Request for Proposal/Request for Qualifications (RFP/RFQ). To access the DEQ list of contractors, please visit this link: <http://deq.mt.gov/StateSuperfund/Contractors.asp>

For more information visit the Montana Recovery website at [www.recovery.mt.gov](http://www.recovery.mt.gov). For information about the DEQ Remediation Division's response to leaking underground storage tanks please visit <http://deq.mt.gov/LUST/index.asp>. ■



# Petro Board Legislation

The Petroleum Tank Release Compensation Board has been working on legislation during this legislative cycle. Specifically, Senate Bill 97 (SB97) was introduced using information developed with input from the board's fund solvency work group which included representatives of the board, the petroleum service station industry, the environmental consultants, and the Department of Environmental Quality staff. SB97 has passed the House and the Senate and was signed by the Governor. You can access the bill and information regarding its status by going to the Legislative website and typing in the bill number where indicated [http://laws.leg.mt.gov/laws09/law0203w\\$.startup](http://laws.leg.mt.gov/laws09/law0203w$.startup).

Following is a brief summary of the components of the proposed legislation:

## Double Wall Petroleum Storage Tanks

The Federal Energy policy Act of 2005 resulted in a requirement that owners/operators must upgrade to double wall USTs if significant alteration to the petroleum storage tank system is required. As that change in permitting requirements has come about, it is clear that the need for the fund to provide incentive for owners/operators to install a double wall tank is no longer necessary. Therefore, owner/operators with releases from a double wall tank system discovered on or after October 1, 2009 will now have to provide the same co-payment, \$17,500, as is required for releases from single wall tank systems.

## Controls on Fund Balance

Historically, the funds available for reimbursement of cleanup expenses were significantly impacted by the original

ceiling and floor the statute set on fee collections established when the law was first passed. SB97 adjusts both the ceiling and the floor by raising them to \$10 million and \$6 million, respectively. This ensures that collections of fees, as the unobligated fund balance rises, are not cut off prematurely. When the fund balance is inadequate, timely payment of reimbursements cannot occur when unexpected cleanup costs are encountered. This change was proposed to minimize future impacts to ongoing cleanups.

## Insurance Incentive

The board's bill also includes language which will provide incentive for owners to have insurance and to require owners/operators to make an insurance claim when a release occurs.

## Statute of Limitations

Since the inception of the fund there has been no limit on contesting a board decision. This creates an accounting and planning quandary. Therefore, a statute of limitation is included in SB97 to require the owner/operators to submit a written request for a hearing to the board. The request for a hearing must be received by the board within 120 days after notice of the board's determination is served on the owner or operator by certified mail. The board is required to inform the owner or operator of the 120 day deadline for requesting a hearing and the board is required to serve on the owner or operator a second notice by certified mail not less than 50 days or more than 60 days after the original notice of determination. If a written request is not received within 120 days, the determination of the board is final. This will enable the board to more effectively manage fund liabilities. ■

## Petro Factoid... Technical Guidance Documents

Did you know that the Montana Department of Environmental Quality (DEQ) offers technical guidance documents for underground storage owners and operators and their consultants? These provide guidance for topics ranging from reporting suspected releases to groundwater sampling methods to site closure evaluation. You can access these guidance documents online at: <http://deq.mt.gov/LUST/TechGuidDocs/techguidlist.asp>



# Applications Encouraged for Petro Board Positions

**T**wo positions on the Montana Petroleum Tank Release Compensation Board (PTRCB) are up for appointment by Governor Brian Schweitzer for a three-year term beginning June 30, 2009. Applications and recommendations are being accepted for these positions.

The board conducts analysis of the viability of the Petroleum Tank Compensation Fund and reports its findings biannually. The Fund was established in 1989 to provide a funding mechanism to address timely cleanup of tank releases

Board membership is unpaid and voluntary, but includes expense and travel reimbursement. You may apply or recommend someone for the Petro or other boards by going online at: [http://governor.mt.gov/boards\\_councils/default.asp](http://governor.mt.gov/boards_councils/default.asp).

You may also send a letter and CV or resume to the Governor at P.O. Box 200801, Helena MT 59620 (fax, 406-444-5529).

If you would like to visit with someone about board appointments contact:

Patti Keebler  
Governor's Appointments Coordinator  
(406) 444-3862  
[pkeebler@mt.gov](mailto:pkeebler@mt.gov) ■

## Petro Factoid... Double Walled Tank System

**D**id you know that all new and replacement underground storage tanks and piping must be double-walled? The concept is that fuel may leak from the primary or inner tank or piping and be contained by the secondary or outer second wall of the tank or piping.

"Double walling provides another layer of protection and leak prevention," says Martin Holt, Environmental Science Specialist with the Montana Department of Environmental Quality Underground Storage Tank Program. "It gives you more time to find a leak before it gets into the environment."

The rule took effect in August 2007 and implements the secondary containment and dispenser sump requirements of the 2005 Energy Policy Act.

Also, when any connecting hardware under the dispenser is replaced (or newly installed), dispenser islands are modified or piping below the shear valve is altered, dispenser sumps must be installed and monitored for releases.

An interstice is the space between the inner wall and outer wall of the double-walled tank and piping. The rule requires interstitial (between space) monitoring for leak detection. Whenever piping passes into or through a sump, that sump becomes an integral part of the interstitial system.

For more information on Montana Administrative Rules for USTs, visit:  
<http://www.deq.state.mt.us/dir/legal/Chapters/Ch56-toc.asp>.

## Meet Steve Sendon – New Board Member

Steve Sendon has been serving on the Petroleum Tank Release Compensation Board for only a brief time. His first meeting was in March and he says, as a financial lender without much environmental or tanks experience, he feels like an outsider. But just as this diehard Montana Griz fan has come to love living in Bozeman, Steve will no doubt soon feel right at home on the Petro Board.

As the Vice President of Lending for the Rocky Mountain Credit Union, Bozeman/Helena, Steve represents the banking industry on the board. His term extends through June of 2011 and he considers it a great opportunity to work with the Montana Department of Environmental Quality (DEQ) and provide an important service. His goals include helping to make the board fiscally independent so it can deal with each situation on its own merits.

“Financially, the board seems to be stuck between a rock and a hard place. I don’t know what the solution is yet,” says Steve. “There needs to be a solution for something as worthwhile as Montana’s environment. It’s just common sense to protect the environment.”

Born in Tampa, Florida, Steve’s family moved to Missoula when he was a toddler. He graduated from Big Sky High School and the University of Montana, and then pursued a successful career in consumer, real estate, and business lending.

His idea of success is helping to advance others. He is proud of promoting five employees to branch management positions. “I’m fiercely loyal. I make the trek from Bozeman to Missoula for most every home game,” he says laughingly.

Steve moved to Bozeman 17 years ago. “I’m living in a place that certainly in my younger days I vowed I would never live, but now I’m glad I do.”

Steve and his wife, Dawn, have two daughters, Alison, 14 and Ashley, 9. He loves sports and, as a member of the Montana Officials Association, coaches high school softball and Jr. Olympic girls fast pitch softball. “Coaching keeps me in the game.”



*Steve Sendon*

He’s at the top of his game as a forward thinker. “I try to make sure that organizations do things the right way, not necessarily the old way that’s always been done.”

He says being an outsider can be a positive influence for the board. “As a lender, I will come to the Petro Board with a unique, outside-of-the-box perspective on things. I will bring a lay person’s viewpoint to how the board can succeed.”

The DEQ, Petro Board and MUST News team are grateful for Steve’s service. ■

## Petro Board Appointments

*MUST News* would like to welcome two new members recently appointed to the Petroleum Tank Release Compensation Board by Governor Brian Schweitzer.

Steve Sendon, Bozeman, is new to the Petro Board and represents the lending industry and works for the Rocky Mountain Credit Union.

Theresa Blazicevich, Stevensville, is serving her second term on the board and represents the field of environmental regulation. She is Director of the Ravalli County Environmental Health Department.



*Theresa Blazicevich*

Their terms extend through June 2011. ■

## New Suspect Release Reporting Rule is Final

The Montana Department of Environmental Quality (DEQ) has finalized amendments to the suspect release reporting rule, and they were adopted on January 16, 2009. The proposed rule amendments were discussed in the fall 2008 issue of *MUST News* at: <http://www.deq.state.mt.us/UST/MUSTnews/MUSTFall2008.pdf>. Based upon comments the DEQ received during the public comment period, the final rule differs from the proposed amendments in one area. When an underground storage tank (UST) owner or operator investigates a leak detection alarm, or a triggered low-flow line leak detector, and determines that a release has not

occurred, documentation of that action must remain at the facility for one year. This is a change from the three years originally proposed in the amendment. The department recommends, however, that records of investigations and corrections of false alarms be retained until the next scheduled facility inspection if that is more than one year from the incident that triggered the alarm.

The tank rules can be found at: <http://www.deq.state.mt.us/dir/legal/Chapters/Ch56-toc.asp>. ■

## TankHelperII – Coming Soon to a Computer Near You

Montana's new online training for underground storage tank operators, TankHelper II, will launch this summer. The Montana Department of Environmental Quality will be testing the training program in May, and it should be online in July or August 2009. Under the Energy Policy Act of 2005, states are required to have operator training authority in place by August 2009,

and by August 2012, all operator/owners must be trained. For more information, contact Martin Holt at (406) 444-0485 or [mholt@mt.gov](mailto:mholt@mt.gov). ■

# National Tanks Conference

**T**he 21<sup>st</sup> Annual Tanks Conference, held in Sacramento, California at the end of March, focused on petroleum release cleanup challenges, management of cleanups and cleanup policy as well as release prevention and state fund challenges. The sessions discussed such issues as alternative and emerging fuels, green remediation, vapor intrusion, risk assessment, cost controls, operator training, compliance testing and expedited enforcement.

Presentation documents are posted online in pdf format at the following address:  
<http://www.neiwpcc.org/tanksconference/overview.asp>.

To access the presentations from the conference home page, click on the day of the week, then each learning “track,” (cleanup, prevention, cleanup policy management, funding and accountability), then page down to each session within each track. You will find presentation pdf files under each session.

Some of the courses include the following sessions:

## Cleanup Policy/Management:

- Alternate Fuels
- Backlog
- Off-Site Contamination: Public Disclosure, Water Well Impacts, and Source
- Water Protection
- Petroleum Brownfields - Linking Cleanup and Revitalization
- Petroleum Brownfields - Recent Revitalization Projects
- Pulse of the Nation
- Roundtable LUST Discussion

## Cleanup:

- Challenges to Cleanup Completion
- Fundamentals of Site Assessment
- Green Remediation
- Innovative Technology #1
- Innovative Technology #2
- Risk: It Isn't Just a Game
- Site Assessment
- Vapor Intrusion

## Funding and Accountability:

- Cost Control
- EPA Only Meeting
- EPA/State Meeting
- Expedited Enforcement
- PID Nuts to Bolts
- State Fund Managers
- What Leaked, Why Did It Leak, and Who Pays?

## Prevention:

- Compliance Assistance
- Compliance Testing
- Getting Out of Your Liquid Reality: Why UST Regulators Should Care About the New Air Quality Rules
- Inspections and Outreach
- Leak Detection and Alternative Fuels
- Managing Emerging Fuels
- Operator Training
- RPS and Standards ■

## Petro Factoid... EPA's Fiscal Year 2008 Annual Report



EPA's Underground Storage Tank (UST) Program provides a snapshot of national UST program activities during fiscal year 2008. Tank program highlights, advances in preventing releases, progress in cleaning up leaks, efforts to enhance communication and information sharing, and a look ahead for next year and the future are all topics covered in the annual report, which is available at [www.epa.gov/oust/pubs/2008annrpt.htm](http://www.epa.gov/oust/pubs/2008annrpt.htm).



## j<sup>U</sup>ST Jargon – Preferential Flow Pathway

**W**hen groundwater or petroleum is flowing or spreading in the subsurface it will generally follow the path of least resistance. When the subsurface is homogenous, it generally flows directly down-gradient at a uniform rate in a relatively straight path. However, the subsurface is rarely homogenous, and the liquids “prefer” flow pathways that offer lesser resistance than others. Sometimes these are man-made such as utility trenches, buried pipelines, sewers, or building foundations. Other pathways are naturally occurring such as fractures in rocks, layers of sand or gravel sediment within a mass of less conductive sediments, animal borings, macro-pores or buried former stream channels. These preferential pathways are important because the contamination can flow in unexpected directions, move much faster than expected or, in the case of utility trenches, can flow directly into buildings via service connections.



Figure 1. Note the black staining where petroleum flowed in the preferential pathway of the disturbed soil around this ten-inch PVC water main in Big Sandy, Montana. The native, undisturbed soil outside the pipe trench is uncontaminated. Petroleum traveled several blocks in both a liquid form and as soil gas vapors through this preferential pathway. Photo by Bill Hammer.

*continued on page 10*



## jUST Jargon – Preferential Flow Pathway – *continued from page 9*



Figure 2. Note dark staining from petroleum contamination present in permeable layer of rock which is overlain by less-permeable layer of shale in Sunburst, Montana. This naturally occurring preferential pathway caused contamination to flow deeper into the ground within the more permeable layer. Photo by Christopher Cote.

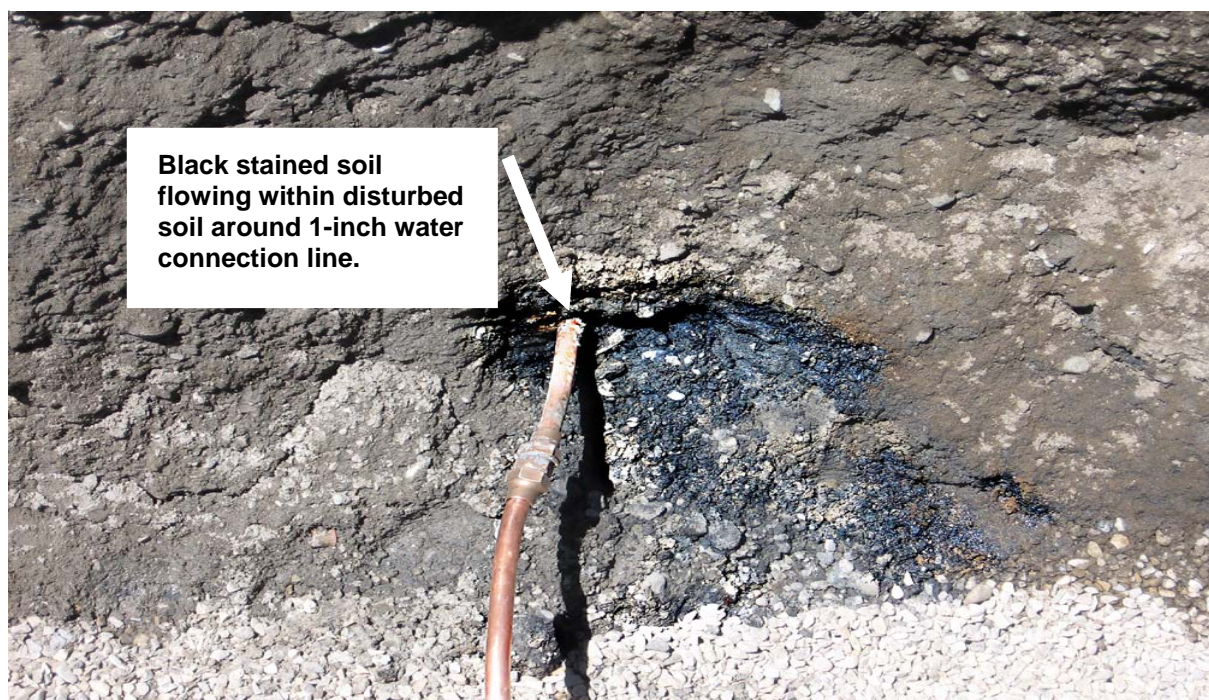


Figure 3. Note black contamination following disturbed soil around one-inch copper service connection right into a home. This can be a significant source of vapor intrusion that can be overlooked when the investigator is unfamiliar with this type of preferential pathway migration. Photo by Aaron Anderson.

# Montana DEQ Launches Green Remediation Practice to Coincide with Earth Day 2009

The Montana Department of Environmental Quality (DEQ) is marking this year's Earth Day with a new initiative to work "greener" when doing environmental remediation, or hazardous and mine waste cleanup. The new practice, called "green remediation," considers environmental impacts at every stage of the cleanup process to maximize the overall benefit of a cleanup.

"By optimizing greenness in environmental remediation, the DEQ can lead by example to promote sustainable energy systems," says Sandi Olsen, DEQ Remediation Division Administrator. "The science of environmental remediation in itself returns a previously contaminated area to sustainability, and now we are looking at the way we are getting there and how we can be greener."

The Remediation Division will consider cost-effective green options when selecting a remedy or cleanup plan, choosing energy use and conducting on-site activities. The division staff will encourage contractors to look for opportunities to do the following:

- Reuse and recycle materials for construction from demolition;
- Power machinery and equipment with clean fuels, such as clean diesel (reduced sulphur content) or bio-fuels;
- Use renewable energy sources, such as solar, wind or hydro power;
- Land farm with bio-remediation (microbes) and reuse materials;
- Use native plants and trees and local materials for vegetation;
- Reduce or eliminate use of toxic materials to prevent recontamination;
- Minimize waste generation, recycle paper, plastics and cans;
- Reduce water use.

"Green remediation must still meet the cleanup standards that the division upholds," says Olsen. "Comparable cleanup must be achieved while incorporating cost-effective green principles."

Remediation Division project officers will coordinate with staff from the DEQ Energy and Pollution Prevention Bureau to determine green resources and cost effectiveness. For more information on green remediation visit <http://www.cluin.org/greenremediation/>.

The recent National Tanks Conference featured a session about green remediation. To access presentation handouts visit: <http://www.neiwpcc.org/tanksconference/agenda.asp?Date=3/31/2009&Track=24>.

The Remediation Division is one of four divisions in DEQ. Remediation is responsible for overseeing investigation and cleanup at state and federal Superfund sites, reclaiming abandoned mine lands, responding to leaking underground storage tanks, and assuring groundwater remediation at sites where agricultural and industrial chemical spills have contaminated groundwater. The purpose of these activities is to protect human health and the environment.

For more information visit <http://deq.mt.gov/Rem/index.asp> or contact Sandi Olsen at (406) 841-5001, [solsen@mt.gov](mailto:solsen@mt.gov). ■

## Attention Distributors!

**Please tell your home heating oil customers to call 1-406-841-3911 within 24 hours after a known or suspected release.**



## The Latest on Michael's

In July 2007, gasoline was discovered to have leaked from the plus unleaded product line that ran from the east end of the underground storage tank (UST) to a transition sump between the north and east dispenser areas at Michael's West, Kalispell. Approximately 10,571 gallons of gasoline pooled on groundwater and migrated along preferential, interconnected flow channels that impacted several utility corridors in North Meridian Road and the Montana Department of Transportation Right of Way (MDT-ROW). Vapors from the release were noted three-quarters to one mile from the release in all directions. Lower explosive levels from air samples collected in the storm drain system were at 100 % but dissipated quickly when the storm drain caps were removed along North and South Meridian Roads, and State Highway 2.

Gasoline flowed a quarter mile south through a storm drain and surfaced in a City of Kalispell's detention pond. An unknown volume of gasoline flowed into Little Spring Creek, Spring Creek, and eventually the confluence of Spring and Ashley Creeks before the weir gate was closed. Initial laboratory analytical data from water samples collected July 27, 2007 at the detention pond and along the two main creeks noted elevated hydrocarbon compounds in the water. However, within 24-hours the concentrations were substantially reduced and on July 31, 2007 water analytical data indicated there were no hydrocarbon compounds in water exceeding the Montana Department of Environmental Quality (DEQ) risk based screening levels.

A fish and wildlife biologist investigating the shoreline, detention pond, and creek waters did not identify loss of fish or wildlife as a result of the release.

Gasoline flowed through the sewer lines and impacted the City of Kalispell's sewage treatment plant located two miles down gradient of the release.

Several groundwater recovery points were installed in the UST basin and MDT-ROW in order to remove and treat total fluids (water and product). A treatment system consisting of an oil/water separator, two air sparing tanks, carbon filtration units, and a detention pond were installed south of Kalispell on private property. A discharge permit was granted and approximately 166,000 gallons of treated

water was discharged into a nearby creek. Prior to a discharge permit being issued, approximately 64,753 gallons of waste water was collected and hauled to oil waste collection centers. Over 230,000 gallons of liquids were recovered.

A small interim, soil vapor extraction system (SVE: recovery wells, monitoring wells) was installed in October 2007 to treat soil within the MDT-ROW. The system has been operating successfully and is scheduled for upgrades in the near future.

DEQ is currently reviewing a revised work plan that includes the following DEQ required tasks:

- A soil boring investigation in Meridian Road to determine the hydrocarbon impact to backfill material, native soil, and groundwater.
- A vapor survey of the utility corridors and the potential installation of an extended SVE system, if needed, to remediate vapors.
- Installation of a monitoring well in the diesel UST basin.
- Installation of an air sparging vapor extraction system (ASVE) into the gasoline UST basin.
- Installation of six air sparge vapor extraction (ASVE) wells into the gasoline UST basin.
- Upgrade of the existing ASVE system and incorporating existing recovery wells into the gasoline UST basin.
- Evaluation of the storm drain system to determine the cause of the vacuum pressure loss in Recovery Well-1.
- Abandonment of the holding pond used to contain the treated water.
- Submittal of a Remedial Investigation Report and (3) subsequent quarterly groundwater monitoring reports. ■



## Fund and Release Status Report

### Petroleum Fund Financial Status — End of 3rd Quarter, Fiscal Year FY 2009

(July 1, 2008 – March 31, 2009)

|   |             |
|---|-------------|
| Total Revenue: .....                              | \$4,531,227 |
| Current and Prior year Claims Expenditures: ..... | \$3,357,828 |
| Total Expenditures: .....                         | \$4,769,055 |
| Outstanding Work Waiting to be Obligated: .....   | \$1,971,604 |

### Petroleum Releases – End of 3rd Quarter, FY 2009

(July 1, 2008 – March 31, 2009)

|                                   |    |
|-----------------------------------|----|
| New Releases: .....               | 23 |
| Releases Resolved (Closed): ..... | 41 |

### Petroleum Release Activity Status – Since Winter 2009 *MUST News*

(February 16 – April 20, 2009)

|                                   |   |
|-----------------------------------|---|
| New Releases: .....               | 5 |
| Releases Resolved (Closed): ..... | 1 |

### Summary of Total Petroleum Release Activity

|   |       |
|---|-------|
| Total Confirmed Releases: .....         | 4,452 |
| Total Active Releases: .....            | 1,595 |
| Total Releases Resolved (Closed): ..... | 2,807 |

## Petro Factoid...25 Years of Release Protection

2009

2009 marks the 25<sup>th</sup> anniversary of the federal Underground Storage Tank (UST) Program. The last quarter of a century demonstrates collaboration between states, tribes, the regulated community and the EPA to prevent and clean up releases from USTs. Because of this strong partnership, the nation's tank programs have made the following accomplishments:

- ◆ Properly closed almost 1.7 million substandard underground storage tanks;
- ◆ Reduced the annual number of underground storage tank releases from almost 67,000 in 1990 to just over 7,300 in 2008; and
- ◆ Cleaned up more than 377,000 releases, more than 80 percent of all reported releases.

You can find more information in the EPA's UST program anniversary booklet, Underground Storage Tank Program: 25 Years of Protecting our Land and Water. You can access the booklet online at [www.epa.gov/oust/pubs/25annrpt.htm](http://www.epa.gov/oust/pubs/25annrpt.htm).

# New Supervisor for DEQ UST Program

**C**ongratulations to Redge Meierhenry who is the new Supervisor for the Underground Storage Tank (UST) Leak Prevention Program under the Permitting and Compliance Division of the Montana Department of Environmental Quality (DEQ).

Redge started his new position on April 13, 2009. He's been with the UST Program since 2001 as an environmental engineer and environmental science specialist. "It's really just moving up a notch. The people all know me and I know them," says Redge.

He works with Montana's underground storage tank owners and operators and the DEQ Remediation Division and the Hazardous Waste Section of the Permitting and Compliance Division. Redge supervises a staff of five.

"I want to bring sensitivity to this job about the regulatory impacts on owners and operators," says Redge. "I also look forward to using my experience, customer service and efficiency to run the program."

He says he's anxious to finish the excellent work started by his predecessor, Bill Rule, on operator training. The online training, TankHelper II, should be ready to roll out this summer.

With a Bachelor of Science Degree in Aeronautical Engineering and Technology from Arizona State University,



*Redge Meierhenry, Underground Storage Tank (UST) Leak Prevention Program Supervisor*

Redge started his professional career as an Aeronautical Engineer. He worked at Boeing in Seattle. While there, he longed for a more rural lifestyle and landed a job with Montana's UST Program.

The goal of the UST Program is to protect human health and the environment by preventing releases of petroleum and hazardous substances from UST systems.

Redge can be reached at (406) 444-1417 or [rmeierhenry2@mt.gov](mailto:rmeierhenry2@mt.gov). ■

## jUST Jargon – Operating Permit

**A** facility may not store, dispense from or otherwise operate an underground storage tank system storing a regulated substance without an Operating Permit issued by the Montana Department of Environmental Quality (DEQ).

The DEQ issues to owners/operators an Operating Permit after receipt of a compliance inspection. The compliance inspection is required to be conducted every three years. Your compliance inspector is authorized to examine your facilities operation, and maintenance and record keeping activities related to each underground storage tank regulated by the department. The department may issue or renew an Operating Permit after examination of the compliance inspection that assesses your facility's compliance with department requirements for underground storage tanks systems.

# School Heating Oil Leak Prompts Vapor Sampling by DEQ

Environmental scientists with the Montana Department of Environmental Quality (DEQ) took indoor air samples at Basin Elementary School in Jefferson County in April following a heating oil leak in January that forced the school to close for two months. Prior independent sampling events took place in February and March. Results from the first two sampling events exceeded several EPA screening levels. Following those results, school officials conducted corrective actions to further mitigate the release, on recommendation from the DEQ.

On April 13, DEQ staff sampled for vapors in two classrooms and a multi-purpose room to confirm that the mitigation measures had succeeded in reducing indoor vapor levels. The containers were set at about the height of a child's breathing area.



*Containers set up to take indoor air samples at Basin Elementary School.*



*DEQ taking indoor air samples at Basin Elementary School.*

The contaminants of concern are petroleum hydrocarbons, including naphthalene and benzene. Potential short-term health effects include headaches and dizziness. Long-term exposure of naphthalene and benzene can also cause cancer. It is important to recognize the public health threat created by petroleum hydrocarbon vapors.

In January, approximately 25 gallons of heating oil leaked inside the school when a fuel line check valve failed. Cleanup began immediately after officials identified the heating oil release. The DEQ commends school district personnel for their quick response in removing building materials contaminated by the leak, including the furnace, part of the ceiling, and concrete where the heating oil pooled. The DEQ also recommended that the building remain unoccupied until vapor levels are below EPA screening levels.

For more information contact Darrick Turner, Acting Supervisor, DEQ Petroleum Tank Release Section, (406) 841-5059 or [dturner2@mt.gov](mailto:dturner2@mt.gov) or Ryan Johnson, DEQ Environmental Science Specialist, (406) 841-5058 or [rjohnson6@mt.gov](mailto:rjohnson6@mt.gov). ■

# Chemical Health Effects...Ethylbenzene

**E**thylbenzene is a colorless liquid with a sweet, gasoline-like odor. It is a natural component of crude oil, a primary component of refined gasoline, and is also used to make styrene, rubber, and plastic wrap, and thus is a common constituent in many products. Annual production of ethylbenzene in the United States is estimated to be greater than one million pounds.

The current EPA maximum permissible level of ethylbenzene in drinking water is 700 parts ethylbenzene per billion parts of water (700 ppb). This is the human health standard currently used by the Montana Department of Environmental Quality (DEQ).

The short term health effects of ethylbenzene are drowsiness, fatigue, headache, and mild eye and respiratory irritation. The long-term effects of ethylbenzene are

potential damage to the liver, kidneys, central nervous system, and eyes. Ethylbenzene has recently been recognized by the California EPA as a carcinogen, and California now has a maximum contaminant level of 300 ppb. The EPA Region 9 Preliminary Remediation Goals Table has also been updated to reflect the recognition of ethylbenzene as a carcinogen.

The DEQ Hazardous Waste Site Cleanup Bureau is currently in the process of revising the ethylbenzene risk based screening level (RBSL) to reflect the carcinogenic nature of the chemical. When the next versions of the Risk Based Corrective Action tables are posted, look for the new ethylbenzene RBSL. ■

## j<sup>U</sup>ST Jargon – Impressed Current System



Cathodic protection is one option for protecting an underground storage tank (UST) from corrosion. There are two types of systems for cathodic protection:

- Sacrificial anode
- Impressed current

An impressed current system uses a rectifier to convert alternating current to direct current. This current is sent through an insulated wire to the anodes, which are special metal bars buried in the soil near the UST. The current then flows through the soil to the UST system and returns to the rectifier through an insulated wire attached to the UST. The UST system is protected because the current going to the UST system overcomes the corrosion-causing current normally flowing away from it.

Federal regulations require that cathodic protection systems installed at UST sites be designed by a corrosion expert. The system must be tested by a qualified cathodic protection tester within six months of installation, and at least every three years thereafter. You will need to keep the results of the last two tests to prove that the cathodic protection is working. In addition, you must inspect an impressed current system every 60 days to verify that the system is operating. Keep results of your last three 60-day inspections to prove that the impressed current system is operating properly.



# EVENTS

## Consultants Meeting

May 15, 2009

10:00 a.m. - noon

Room 111 • Lee Metcalf Building  
1520 East Sixth Avenue • Helena, MT 59620  
Contact: Mike Trombetta, 841-5045 or [mtrombetta@mt.gov](mailto:mtrombetta@mt.gov)

\*The meeting will be videoconferenced to Billings and Kalispell

Kalispell Videoconference Location:     **Flathead Valley Community College**  
Learning Resource Center • Rm 120  
777 Grandview Dr • Kalispell, MT  
Site Contact: Malinda Crawford (406) 756-3828

Billings Videoconference Location:     **DEQ Office**  
Airport Business Park IP-9  
1371 Rimtop Drive • Rm 108 • Billings, MT  
Site Contact: John Raty (406) 247-4454



## Petroleum Tank Release Compensation Board

May 18, 2009

July 27, 2009

September 28, 2009

December 7, 2009

10:00 a.m. – 2:00 p.m.

Montana Department of Environmental Quality  
Room 111 • Lee Metcalf Building  
1520 East Sixth Avenue • Helena, MT 59620  
Contact: Terry Wadsworth • 841-5092 • [twadsworth@mt.gov](mailto:twadsworth@mt.gov)

## SAVE THE DATE

### Montana Petroleum Marketers and Convenience Store Association 2009 Convention

June 9– 11, 2009

Hilton Garden Inn  
3729 North Reserve Street, Missoula, Montana, 59101

For more information:

(406) 449-4133 or visit <https://shopping.wpma.com/Convention.aspx?state=MT>

For more information on the MT Petroleum Marketers and Convenience Store Association visit:  
<http://www.pmaa.org/petroshows/montana.htm>



### Petro Factoid...Attention AST Owners



Most Aboveground Storage Tanks (ASTs) need to meet the US EPA's Spill Prevention, Control and Countermeasure (SPCC) requirements. SPCC applies to facilities with a single AST with a storage capacity greater than 660 gallons, or multiple tanks with a combined capacity greater than 1,320 gallons. On April 1, 2009, the *Federal Register* published EPA's delay of the effective date of the December 5, 2008, SPCC final rule. The delay is in response to public comments. The December 5, 2008, amendments will now become effective on January 14, 2010. The April 1, 2009, rule has no impact on the compliance date for SPCC, which is July 1, 2009. The compliance date for farms has not yet been established.

For more information visit: <http://www.epa.gov/emergencies/spcc>.

Acknowledgements to those involved in the production of the summer 2008 *MUST News*:

Editorial and Writing:

Aaron Anderson  
 John Arrigo  
 Mary Ann Dunwell  
 Scott Gestring  
 Paul Hicks  
 Martin Holt  
 Ryan Johnson  
 Jeff Kuhn  
 Redge Meierhenry  
 Sandi Olsen  
 Marcile Sigler  
 Amy Steinmetz  
 Edward Thamke  
 Mike Trombetta  
 Darrick Turner  
 Terry Wadsworth

Production Design:

JoAnn Finn

Web Production:

Kathy Gessaman



### Call for Articles...

The *MUST News* production team welcomes your articles about successful cleanups or lessons learned from the operation and maintenance of petroleum storage tanks. Please contact Mary Ann Dunwell at [mdunwell@mt.gov](mailto:mdunwell@mt.gov) or (406) 841-5016, if you would like to submit an article. We would like to reserve the right to edit if necessary.